National Institute of Environmental Health Sciences

Seasonal patterns of cardiovascular disease mortality of adults in Burkina Faso, West Africa

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Abstract:

P>Objective To evaluate seasonal patterns of cardiovascular death in adults, which are possibly influenced by hot and dry climate, in a rural setting of Burkina Faso. Methods Cause of death was ascertained by verbal autopsy. Age-specific death rates (cardiovascular death and all-cause) by month of death were calculated. Seasonal trends and temperature effects were modelled with Poisson regression. Results In 11 174 adults (40+), 1238 deaths were recorded for the period 1999-2003. All-cause mortality in adults (40-64 years) and the elderly (65+ years) was 1269 per 100 000 (95% CI 1156-1382) and 7074 (95% CI 6569-7579), respectively. Cardiovascular death was the fourth most frequent cause of death in adults (40+), with a mortality of 109.9 (95% CI 76.6-143.1) for ages 40-64 and 544.9 (95% CI 404.6-685.1) for ages 65+. For all-causes, the mortality was highest in March and for cardiovascular death highest in April, the hot dry season (March-May). Mean monthly temperature was significantly related to mortality in old ages. Conclusions Cardiovascular mortality varies by season, with higher mortality rates in the hot dry season. The pattern seems to be consistent with other studies suggesting association between hot weather and cardiovascular disease. A 'heat-wave' effect appears to be observable also in areas with hot average temperatures.

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Resource Description

Exposure :

weather or climate related pathway by which climate change affects health

Temperature

Temperature: Extreme Heat, Fluctuations

Geographic Feature:

resource focuses on specific type of geography

None or Unspecified

Geographic Location:

resource focuses on specific location

Non-United States

Non-United States: Africa

African Region/Country: African Country

Other African Country: Burkina Faso

Health Impact: ☑

specification of health effect or disease related to climate change exposure

Cardiovascular Effect, Morbidity/Mortality

Cardiovascular Effect: Other Cardiovascular Effect

Cardiovascular Disease (other): cardiovascular disease mortality

Population of Concern: A focus of content

Population of Concern: ☑

populations at particular risk or vulnerability to climate change impacts

Elderly

Resource Type: ☑

format or standard characteristic of resource

Research Article

Timescale: ☑

time period studied

Time Scale Unspecified